

**AIR EMISSION PERMIT NO. 00900021- 001
IS ISSUED TO**

Northern States Power Company

NSP - Granite City Generating Plant
680 US Highway 10 North
St. Cloud, Benton County, Minnesota 56303

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date
Total Facility Operating Permit	September 15, 1995

This permit authorizes the permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Pt. 70

Issue Date: November 7, 2000

Expiration: November 7, 2005

All Title I Conditions do not expire.

Rodney E. Massey, P.E.
District Director

For Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Certain requirements which have been determined not to apply are listed in Table A of this permit.

FACILITY DESCRIPTION:

This facility generates electricity mainly during periods of peak electrical demand. It is composed of four identical combustion turbine generators capable of firing either natural gas or distillate fuel oil and a small emergency diesel generator (an insignificant activity). Also, two one-million gallon fixed roof storage tanks are located at the facility. In the past, one of the tanks was leased for gasoline storage, however, the permittee no longer engages in this activity and the storage of gasoline is prohibited by this permit. The other tank stores distillate fuel oil. The storage of distillate fuel oil is also an insignificant activity.

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/07/00

Facility Name: NSP - Granite City Gen

Permit Number: 00900021 - 001

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item:**Total Facility**

What to do	Why to do it
Gasoline Storage: The Permittee shall not store or allow the storage of gasoline at the facility, except as provided by Minn. R. 7007.1300, subp. 2(E)(4).	Minn. R. 7007.0800, subp. 2
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A or B.	Minn. R. ch. 7017
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
General Performance Test (PT) Requirements: Performance Tests are due as outlined in Tables A and B of this Permit. See Table B for additional testing requirements. PT Notifications (written): due 30 days before each Performance Test PT Plan: due 30 days before each Performance Test PT Pre-test Meeting: due 7 days before each Performance Test PT Report: due 45 days after each Performance Test PT Report-Microfiche: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1 and 2
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/07/00

Facility Name: NSP - Granite City Gen

Permit Number: 00900021 - 001

Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
Record keeping: Retain all records at the stationary source or other Northern States Power site, for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/07/00

Facility Name: NSP - Granite City Gen

Permit Number: 00900021 - 001

Subject Item: GP 001 Combustion Turbines**Associated Items:** EU 001 Turbine Engine 1

EU 002 Turbine Engine 2

EU 003 Turbine Engine 3

EU 004 Turbine Engine 4

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity once operating temperature has been attained, for each emission unit in GP 001.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input (equivalent to a fuel oil sulfur content of 0.49 percent by weight) for each emission unit in GP 001.	Minn. R. 7011.2300, subp. 2
Sulfur Content of Fuel: less than or equal to 0.49 percent by weight for distillate fuel oil.	Minn. R. 7007.0800, subp. 2
Permitted Fuels: Pipeline natural gas and distillate fuel oil only.	Minn. R. 7007.0800, subp. 2
Distillate Fuel Oil Supplier Certification: At the time of the first fuel oil delivery after the effective date of this permit, the Permittee shall obtain a single certification from the fuel oil supplier guaranteeing a maximum sulfur content in all fuel oil deliveries thereafter. The single certification shall also state that the supplier will notify the Permittee in writing on the date of delivery of fuel oil with a sulfur content exceeding the guaranteed maximum, that the fuel oil sulfur content exceeds the guaranteed maximum value.	Minn. R. 7007.0800, subp. 4 and 5
Initial Performance Test: due 365 days after Permit Issuance to measure opacity of each emission unit in GP 001 while combusting distillate fuel oil.	Minn. R. 7017.2020, subp. 1
For additional applicable performance test requirements, see "General Performance Test Requirements" in Table A, Subject Item "Total Facility".	

TABLE B: SUBMITTALS

11/07/00

Facility Name: NSP - Granite City Gen
Permit Number: 00900021 - 001

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

Permit Technical Advisor
Permit Section
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Unless another person is identified in the applicable Table, send all other submittals to:

Supervisor
Compliance Determination Unit
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

11/07/00

Facility Name: NSP - Granite City Gen
Permit Number: 00900021 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility

TABLE B: RECURRENT SUBMITTALS

11/07/00

Facility Name: NSP - Granite City Gen

Permit Number: 00900021 - 001

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). The Certification shall be submitted on a form approved by the Commissioner, both to the Commissioner, and to the U.S. EPA regional office in Chicago. This report covers all deviations experienced during the calendar year. The EPA copy shall be sent to: Mr. George Czerniak, Chief, Air Enforcement and Compliance Assurance Branch, Air and Radiation Division, EPA Region V, 77 West Jackson Boulevard, Chicago, Illinois 60604.	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year following Permit Issuance (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

TECHNICAL SUPPORT DOCUMENT
For
DRAFT AIR EMISSION PERMIT NO. 00900021-001

This technical support document is for all the interested parties of the draft permit. The purpose of this document is to set forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 4911)
Northern States Power 414 Nicollet Mall Minneapolis, Minnesota 55401-1993 (612) 337-2287	680 US Highway 10 North St. Cloud Benton County Minnesota

1.2. Description of the facility

This facility generates electricity mainly during periods of peak electrical demand. It is composed of four identical combustion turbine generators capable of firing either natural gas or distillate fuel oil, and a small emergency diesel generator (an insignificant activity). Also, two one-million gallon fixed roof storage tanks are located at the facility. In the past, one of the tanks was leased for gasoline storage, however, the permittee no longer engages in this activity and the storage of gasoline is prohibited by this draft permit. The other tank stores distillate fuel oil. The storage of distillate fuel oil is also an insignificant activity.

1.3 Description of any changes allowed with this permit issuance

No changes are allowed by this draft permit.

1.4 Description of all amendments issued since the issuance of the last total facility permit and to be included in the Part 70 Permit.

Permit Number and Issuance Date	Action Authorized
202Q-93-I/O-1	Installation and operation of an emergency diesel generator (insignificant activity in the Minn. R. ch. 7007 permit program).

Permit Action Number:
Date: 2/24/2004

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Pb tpy	All HAPs tpy
Total Facility Limited Potential Emissions*	258.7	258.7	2142.0	2960.6	491.8	72.1	0.04	7.68
Total Facility Actual Emissions**	4.16	4.16	0.08	43.73	10.88	13.25	NR	NR

*These are the limited potential emissions from column 3 in GI-07 from Delta. They differ from those in the permit application sent by the company in that they have been verified and corrected as needed by MPCA staff. These are the potential emissions that would appear in a public notice.

**1998 Emission Inventory data. Note that VOC includes emissions from gasoline storage which is no longer conducted at this facility and is not permitted by this draft permit.

1.6 Comments Received During Public Notice or EPA Review: NONE

Table 2. Facility and Permit Classification

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD	NO _x , SO ₂ , CO, PM, PM ₁₀		VOC, Pb
NAAR	N/A	N/A	N/A
Part 70 Permit Program	NO _x , SO ₂ , CO, PM ₁₀		VOC, HAPs

*Refers to potential emissions that are less than those specified as major by 40 CFR 52.21, 40 CFR pt. 51 Appendix S, and 40 CFR pt. 70.

2. Regulatory and/or Statutory Basis

Summary Regulatory and/or Statutory Basis of the Emission or operational Limit

Regulatory Overview of Facility

GP #	Applicable Regulations	Comments:
GP 001	Minn. R. 7011.2300, subp. 1 and 2	Standards of Performance for Stationary Combustion Engines; Opacity and SO ₂ standards
	Minn. R. 7017.2020, subp. 1	Opacity performance testing for each GP 001 emission unit

Permit Action Number:

Date: 2/24/2004

3. Technical Information

Opacity performance testing of each emission unit in GP 001 while combusting distillate fuel oil, and distillate fuel oil sulfur content certification are required. These are necessary to meet the monitoring requirements of the federal part 70 operating permit program. The opacity testing is required within 365 days after permit issuance (instead of the more common 180 days after issuance) because the turbines are run infrequently, and combust mostly natural gas. The additional time allowed will enable testing while combusting distillate fuel oil.

4. Conclusion

Based on the information provided by the Northern States Power, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 00900021-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Marshall M. Cole

Attachment: Emission Calculations